SOAH DOCKET NO. 582-07-2673
TCEQ DOCKET NO. 2007-0204-WDW

APPLICATION OF TEXCOM GULF DISPOSAL, L.L.C. FOR TEXAS COMMISSION ON ENVIRONMENTAL QUALITY UNDERGROUND INJECTION CONTROL PERMIT NOS. WDW410, WDW411, WDW412, and WDW413	§	BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS

SOAH DOCKET NO. 582-07-2674
TCEQ DOCKET NO. 2007-0362-IHW

APPLICATION OF TEXCOM GULF DISPOSAL, L.L.C. FOR TEXAS COMMISSION ON ENVIRONMENTAL QUALITY INDUSTRIAL SOLID WASTE PERMIT NO. 87758	§	BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS

PRE-FILED TESTIMONY OF

WILLIAM R. WILDER, Ph.D.

ON BEHALF OF ALIGNED PROTESTANTS

MONTGOMERY COUNTY AND CITY OF CONROE

TABLE OF CONTENTS

I. BACKGROUND AND EXPERIENCE

Q. DR. WILDER, WOULD YOU STATE YOUR FULL NAME?

A. William Ray Wilder.

Q. WHAT IS YOUR EDUCATIONAL BACKGROUND?

A. I have a bachelor's, a master's, and a doctorate, all in biology from Rice University.

Q. WHAT IS YOUR PRESENT OCCUPATION?

A. I am the president and owner of Axis, A-X-I-S, Environmental Services, Incorporated, in The Woodlands, Texas.

Q. WHEN DID YOU RECEIVE YOUR PH.D. IN BIOLOGY?

A. 1987.

Q. HOW LONG HAVE YOU BEEN INVOLVED IN THE ENVIRONMENTAL INDUSTRY OR AN INDUSTRY INVOLVING ENVIRONMENTAL ISSUES IN YOUR PROFESSIONAL CAREER?

A. I started doing some natural resource environmental and ecological consulting while I was in grad school, probably in the 1981-82 timeframe. And upon completion of my Ph.D., I went to work part time for a consulting firm and began working on hazardous waste work as well.

Q. JUST BRIEFLY, WHAT WOULD BE THE NATURE OF THE WORK OF AXIS ENVIRONMENTAL SERVICES, INCORPORATED?

A. Larry Peyton and I started the firm back in 1997. He is a chemical engineer; and we started Axis as a company-serving industry, both refining and petrochemical as well as insurance companies and oil and gas companies, providing them with

everything from permitting, site investigation, remediation plans, management of remediation operations, oversight of emergency responses, risk management, and just a general soup-to-nuts approach to environmental regulatory and management needs.

Q. SO HOW MANY TOTAL YEARS HAVE YOU ENGAGED IN THAT BUSINESS WITH AXIS?

A. 12 and a half years.

Q. IN YOUR BUSINESS WITH AXIS ENVIRONMENTAL SERVICES, ARE YOU INVOLVED IN ISSUES INVOLVING WASTEWATER OR INDUSTRIAL WASTE STREAMS?

A. Yes.

Q. HOW MUCH INVOLVEMENT HAVE YOU HAD IN THAT REGARD?

A. It has varied from year to year, but a lot of my clients are large petrochemical or refining operations. Obviously they have a tremendous amount of concern and responsibility for wastewater treatment and discharge. Some of my clients in the oil and gas industry as well have issues with wastewater that they generate either as part of their exploration or production activities. I also advise and consult with insurance companies that have various issues involving policies that they have written for wastewater treatment plants or for facilities that as part of their process include a wastewater treatment plant.

Q. SO WOULD IT BE FAIR TO SAY THAT YOU ARE FAMILIAR WITH THE ISSUES INVOLVING THE APPROPRIATE AND SAFE DISPOSAL OF A CLASS 1 NONHAZARDOUS INDUSTRIAL WASTEWATER STREAM?

A. Yes.

Q. CAN YOU BRIEFLY LIST THE TYPE OF COMPANIES OR INDUSTRIES THAT WOULD HAVE A NEED TO DISPOSE OF A CLASS 1 NONHAZARDOUS INDUSTRIAL WASTEWATER STREAM?

A. Virtually any manufacturing facility, whether it is a large operation like a refinery or a chemical facility, would have the potential for generating a Class 1 nonhazardous wastewater stream. Smaller facilities, even car shops or car dealerships, dry cleaning facilities, there are a number of commercial operations that produce process wastewaters that you have to distinguish from the sanitary sewer that would also be generated by an operation. For instance, your bathrooms, your sinks, your toilets, that would be your sanitary sewer; and anything that you use in the process of manufacturing goods, whether you are doing metal working or a plastics manufacturer, anything that comes in contact with your actual manufacturing process would potentially generate a Class 1 nonhazardous wastewater stream.

Q. ARE YOU FAMILIAR WITH THE DISPOSAL OF A CLASS 1 NONHAZARDOUS WASTEWATER STREAM THROUGH A PUBLICLY OWNED TREATMENT WORKS?

A. Yes.

Q. ARE YOU FAMILIAR WITH OTHER MEANS OF SAFE DISPOSAL OF A CLASS 1 NONHAZARDOUS INDUSTRIAL WASTEWATER STREAM?

A. Yes. When I was working for OHM Corporation back in the '90s as regional technical director, I was part of something called the Technology Assessment and

Commercialization Group. And it was our responsibility for the OHM Corporation to research and evaluate and basically render opinions on all of the different waste disposal options that were being offered either privately or publicly for hazardous and nonhazardous waste at the time.

Q. HAVE YOU EVER BEEN ASKED TO GIVE TESTIMONY OR TO BE QUALIFIED AS AN EXPERT WITNESS IN A COURT OF LAW CONCERNING YOUR TRAINING AND EXPERIENCE IN THE INDUSTRY THAT YOU HAVE PRACTICED IN?

A. Yes.

Q. HOW MANY TIMES, IF YOU KNOW?

A. Certainly dozens of times. There were a few cases that went as far as actual trial. There were many, many more that went through depositions and then wound up settling out. There were others that settled through mediation, but I would have to say maybe a dozen court cases and too many depositions and other cases for me to easily count right now, but probably around 40 or 50 possibly.

Q. HAVE YOU EVER BEEN ASKED TO GIVE A PROFESSIONAL OPINION IN STATE DISTRICT COURT IN THE STATE OF TEXAS?

A. Yes.

Q. HAVE YOU EVER BEEN ASKED TO GIVE A PROFESSIONAL OPINION BASED ON YOUR TRAINING AND EXPERIENCE IN THE UNITED STATES DISTRICT COURT ANYWHERE?

A. Yes.

Q. DO YOU HAVE ANY EXPERIENCE IN YOUR PROFESSIONAL CAREER IN THE DISPOSAL OF SOLID WASTE?

A. Yes.

Q. HOW MANY YEARS EXPERIENCE IN THAT REGARD, SIR?

A. That was probably something that came up on a reasonably regular basis throughout the 24 years or so that I have been working with hazardous waste and industrial waste.

Q. HAVE YOU HAD ANY EXPERIENCE IN ANALYZING AND REVIEWING PUBLIC INTEREST ISSUES IN REGARD TO THE DISPOSAL OF NONHAZARDOUS INDUSTRIAL WASTEWATER AND THE DISPOSAL OF SOLID WASTE?

A. Yes.

Q. HOW MUCH EXPERIENCE DO YOU HAVE IN THAT REGARD, SIR?

A. There have been several facilities or several cases where that was an issue with some of the disposal management that we were handling for a client at the time.

Q. CAN YOU BRIEFLY TELL US TO WHAT EXTENT THE PUBLIC INTEREST ISSUE WAS SOMETHING YOU EXAMINED ON PROJECTS YOU HAVE WORKED ON THAT INVOLVED A PUBLIC INTERST COMPONENT?

A. There were a number of cases where facilities required either my services or the services of the company I worked for at the time to look at all of their waste streams, both hazardous and nonhazardous, and determine the appropriate methods available for disposing of those streams, whether that was on-site

treatment prior to removal from the site or removal from the site to various facilities that would perform treatment or disposal operations. The neighbors, obviously, were one of the public concerns. I was involved with creation of the environmental laws in Venezuela where the entire population had to be considered in terms of the way we advised them of setting up the laws and how to structure their waste management protocols.

Q. DID ANY OF THE PROJECTS THAT YOU WORKED ON WITH RESPECT TO APPROPRIATE DISPOSAL OF WASTE HAVE PERMITTING FEATURES WHERE A PUBLIC INTEREST CONSIDERATION WAS PART OF THE PERMITTING FEATURE?

A. Yes, I believe the Proteco landfill in Ponce, Puerto Rico, had those requirements. I was down there in the early '90s advising the Puerto Rican government and the owners of the Proteco landfill on the various aspects of the Resource Conservation and Recovery Act and how it affected them and, obviously, again, the neighbors and the surrounding area to the landfill was one of the major issues that we had to address.

Q. HAVE YOU HAD TO CONSIDER IN YOUR WORK ALTERNATIVE MEANS OF DISPOSAL FOR A NONHAZARDOUS INDUSTRIAL WASTEWATER STREAM AND/OR ALTERNATIVE MEANS OF DISPOSAL FOR SOLID WASTE PRODUCTS?

A. Yes. There were, again, several facilities over the years that required an evaluation of their streams to see where the materials should be disposed and how

they should be disposed of to create the least amount of risk and the greatest benefit to both the public and, by extension, the manufacturer or the generator.

Q. ARE YOU FAMILIAR WITH ISSUES THAT PERTAIN TO MAINTAINING FRESH DRINKING WATER?

A. Yes.

Q. ARE YOU FAMILIAR WITH ISSUES PERTAINING TO HOW AN INDUSTRIAL WASTEWATER STREAM COULD IMPACT OR POLLUTE FRESH DRINKING WATER?

A. Yes. One of my areas of expertise is the fate and persistence of manmade materials in the environment, whether the manmade materials come from a hazardous source or nonhazardous source. So I have looked at a variety of potential sources, how they might be released and how they might move upon release and where they might wind up impacting target organisms.

Q. IN YOUR EXPERIENCE IN WORKING WITH ISSUES INVOLVING APPROPRIATE DISPOSAL OF LIQUID AND SOLID WASTE MATERIALS FROM INDUSTRIAL GENERATORS, HAVE YOU EVER HAD TO EVALUATE, ANALYZE, AND GIVE ADVICE ON ECONOMIC ISSUES CONNECTED TO SUCH DISPOSAL OPERATIONS?

A. Yes, certainly with both Resource Conservation and Recovery Act and Superfund facilities, I was asked to review the economic impact of the various disposal options. I was also a corporate environmental director for Southdown Cement with direct fiscal responsibility for determination of best management practices or final disposition of various waste streams, both hazardous and nonhazardous.

AT THIS TIME THE ALIGNED PROTESTANTS, MONTGOMERY COUNTY AND THE CITY OF CONROE, WILL OFFER DR. WILLIAM WILDER AS AN EXPERT IN THE AREA OF APPROPRIATE AND SAFE DISPOSAL OF BOTH LIQUID AND SOLID INDUSTRIAL WASTES INCLUDING ISSUES INVOLVING PRACTICALITY, ECONOMICS, AND FEASIBILITY, AND PUBLIC INTEREST CONSIDERATIONS.

ADDITIONALLY, ALIGNED PROTESTANTS OFFER DR. WILDER AS AN EXPERT IN THE COMPOSITION OF A CLASS 1 NONHAZARDOUS INDUSTRIAL WASTEWATER STREAM AND THE COMPOSITION OF SOLID WASTE MATERIALS WHICH ARE A PRODUCT OF THE PROCESS OF DISPOSING OF A CLASS 1 NONHAZARDOUS INDUSTRIAL WASTEWATER STREAM.

II. PUBLICLY OWNED TREATMENT WORKS, PRETREATMENT AND OTHER DISPOSAL FACILITIES

Q. ARE YOU FAMILIAR WITH A PUBLICLY OWNED TREATMENT WORKS, THE CONCEPT, OR WHAT THAT IS?

A. Yes.

Q. IS IT POSSIBLE FOR A PUBLICLY OWNED TREATMENT WORKS TO DISPOSE OF A CLASS 1 NONHAZARDOUS INDUSTRIAL WASTEWATER STREAM?

A. Yes. They are allowed to accept streams from generators of Class 1 nonhazardous wastewaters generally pending that those streams meet pretreatment requirements.

Q. IS THERE A PRETREATMENT FEATURE INVOLVED FOR A CLASS 1 GENERATOR TO USE A POTW TO DISPOSE OF THEIR WASTEWATER?

A. Yes. There is a general requirement as well as usually I find there are local additions to these requirements which are tailored to meet the various loads and types of industry that feed into the POTW.

Q. WHAT WOULD BE SOME OF THE METHODS OF PRETREATMENT THAT A CLASS 1 NONHAZARDOUS INDUSTRIAL WASTEWATER GENERATOR MIGHT USE?

A. They would probably be required to buffer the wastewater stream, in other words, adjust the pH, also known as neutralization. Sometimes streams may require flocculation or removal of particulates to a certain size. In some cases, there may be a requirement to reduce the metals concentrations in the wastewater stream to certain acceptable levels. And in all cases that I have seen, the streams have to be rendered acceptable both for flammability and explosivity. In other words, they have to pass requirements for not being flammable or explosive.

Q. IS PRETREATMENT OF WASTEWATER A PROCESS THAT THE WASTE GENERATOR WOULD UNDERTAKE TYPICALLY AT THEIR FACILITY?

A. Yes.

Q. WHAT ARE TYPICALLY SOME OF THE WASTE COMPONENTS THAT ARE EITHER REMOVED OR DEALT WITH IN THE PRETREATMENT PROCESS?

A. In the facilities that I have worked with, some of the primary pretreatment targets would be particulates, in other words, solids, suspended solids, or solids that may

actually be floating or resident on the bottom of vessels, tanks, or pipelines. Again, as I said earlier, they would probably also be making sure that the pH of their waste stream has been buffered to an acceptable level prior to discharge to the POTW or transportation to the POTW. And depending on the type of facility, if they have high organics content, hydrocarbon content, in general there would certainly be the goal to remove any type of free product to the extent that it would create potential flammability or explosivity. And, again, the reactivity of the material would also consider its ability to generate cyanide. So there are a lot of different neutralization and reactivity minimization processes that would take place in addition to filtering or removal of particulates by means other than filtering.

Q. ONCE SOME FORM OF PRETREATMENT HAS BEEN UNDERTAKEN BY A GENERATOR OF WASTEWATER AND THEIR WASTE STREAM MADE ACCEPTABLE FOR INTRODUCTION TO A POTW, DOES THAT LEAVE SOME RESIDUAL MATERIAL THAT THE GENERATOR THEN HAS TO DISPOSE OF?

A. In many cases, yes.

Q. IN WHAT FORM DOES THAT RESIDUAL MATERIAL TYPICALLY TAKE? IS IT LIQUID, SOLID, OR WHAT?

A. Depending on the characteristic that was being addressed by the pretreatment, obviously if it is removal of particulates from the waste stream, the resultant material would be solid, and depending on how it was removed from the waste stream, the dryness or density of the solid would be variable. In the case of

removal of free organics, the residual could possibly be an organic material that could be reintroduced into the process stream, which is why I commented earlier that in most cases, it results in something that has to be disposed of. In the case of flocculation of metals, you may wind up with a sludge with concentrated metals which would have to be disposed of as a hazardous waste in most cases. So there are a variety of end results depending on the stream being treated and how it is being processed in pretreatment.

Q. IS ALL OF THE RESULTING SLUDGE HAZARDOUS?

A. No, it is not. It depends on a case-by-case basis; but, no, not all pretreatment residue is hazardous.

Q. WITH RESPECT TO DEEP WELL INJECTION OF CLASS 1 NONHAZARDOUS INDUSTRIAL WASTEWATER, IS THERE IN YOUR EXPERIENCE SOME REQUIREMENT POTENTIALLY FOR PRETREATMENT OF THAT WASTE BEFORE IT IS INJECTED INTO THE GROUND?

A. Yes, depending on both the specifics of the generator and the stream that they are disposing of and depending on the specifics of the disposer's facility, what type of formation they are injecting into. That generally drives the pretreatment criteria, whether that is done on-site or not remains to be negotiated by both the generator and the disposer.

III. OTHER DEEP WELL INJECTION FACILITIES

Q. HAVE YOU HAD AN OPPORTUNITY TO REVIEW SOME FEATURES OF THE TEXCOM GULF DISPOSAL APPLICATION FOR DEEP WELL INJECTION AT ISSUE IN THIS CASE?

A. Yes.

Q. ARE YOU FAMILIAR WITH AND HAVE YOU REVIEWED ANY ASPECTS OF ANY OTHER DEEP WELL INJECTION FACILITY IN THE HOUSTON AREA?

A. I have had an opportunity over the years to not necessarily investigate these facilities as much as look at their criteria for what streams they can or cannot take and advise my clients on what type of pretreatment their streams would require in order to meet those disposal criteria.

Q. IS THERE ANOTHER DEEP WELL INJECTION FACILITY IN THE HOUSTON AREA THAT YOU ARE FAMILIAR WITH THAT HAS A NAME OR REFERENCE OF NEWPARK?

A. Yes. In most of the TCEQ documents I reviewed, it is also referred to as Big Hill Industries, or Big Hill IND.

Q. WHERE IS THAT FACILITY?

A. It is in Jefferson County.

Q. ARE YOU FAMILIAR WITH THE TERM OR REFERENCE OF "TOTAL SUSPENDED SOLIDS"?

A. Yes.

Q. WHAT ARE WE REFERRING TO WHEN WE TALK ABOUT "TOTAL SUSPENDED SOLIDS"?

A. Total suspended solids would be whatever particulates are in the waste stream that are not actually dissolved into the waste stream itself. In other words, if you have silts or clays that are suspended at least to the extent that they would stay suspended during generation and transportation and injection, any type of nondissolved solid that is part of the waste stream is a total suspended solid.

Q. IS THERE A REFERENCE IN THE TEXCOM MATERIALS AS TO THE LEVEL OF TOTAL SUSPENDED SOLIDS THAT THEY ARE ABLE TO RECEIVE?

A. I did not see anything in reference to the concentration of total suspended solids; but I believe in one of the testimonies that I looked at or one of the hearing transcripts, I believe it was noted that the waste stream could not contain particulates in excess of 20 microns in diameter.

Q. DO YOU HAVE ANY KNOWLEDGE OF THE LEVEL OF TOTAL SUSPENDED SOLIDS THAT COULD BE RECEIVED AT THE INJECTION FACILITY THAT YOU HAVE REFERRED TO AS NEWPARK?

A. In the past, in discussions with some of the folks out there at that facility, I believe they are allowed to take a reasonably substantial concentration of solids. If memory serves correctly, possibly as much as 5 percent solids.

Q. IN YOUR EXPERIENCE AND WORK IN DEALING WITH SOME OF YOUR CLIENTS, HAVE YOU EVER ADVISED THEM OR PROVIDED THEM INFORMATION CONCERNING THE TOTAL SUSPENDED SOLIDS THAT IS ACCEPTABLE AT NEWPARK, ALSO KNOWN AS BIG HILL?

A. That is an issue that comes up in any evaluation of acceptability of waste streams, so yes.

Q. WHAT FACTOR DID YOU USE IN ADVISING YOUR CLIENTS WITH RESPECT TO THE TOTAL SUSPENDED SOLIDS THAT COULD BE ACCEPTED AT BIG HILL/NEWPARK?

A. Basically if my clients had a waste stream that was reasonably high in solids, Newpark would have been a facility to consider because of their ability by permit to accept reasonably high concentrations of solids in the material to be injected deep well.

Q. IS THAT, IN FACT, THE ADVICE THAT YOU OPERATED WITH IN ADVISING SOME OF YOUR CLIENTS IN THE PAST?

A. Yes.

Q. IF AN INJECTION FACILITY BY PERMIT IS ABLE TO ACCEPT A SMALLER LEVEL OF TOTAL SUSPENDED SOLIDS, WOULD THAT NECESSITATE POTENTIALLY SOME FORM OF PRETREATMENT BY A GENERATOR USING THAT FACILITY?

A. Yes, pretreatment by the generator or the disposer prior to injection. And bearing in mind, that the particulate size and concentration of total suspended solids is not necessarily directly comparable. You might still have 5 percent solids if the solid particles are all below, for instance, the 20 microns that I mentioned earlier, then that would still be acceptable; but it might change how the process equipment would have to handle that material.

Q. WE HAVE TALKED ABOUT PRETREATMENT BEFORE AN INDUSTRIAL WASTEWATER STREAM CAN BE SENT TO A POTW, IS THAT CORRECT?

A. Yes.

Q. IS THERE POTENTIALLY A FORM OF PRETREATMENT, PERHAPS EVEN A SIMILAR FORM OF PRETREATMENT, BEFORE A WASTE STREAM COULD BE ACCEPTED AT A DEEP WELL INJECTION FACILITY?

A. Yes. The processes would frequently be the same. The extent to which the process would have to render the effluent acceptable to the disposer is what would change.

Q. IS PRETREATMENT A PROCESS THAT CARRIES WITH IT A FISCAL COST OR A DOLLAR COST?

A. Yes.

Q. IS THAT DOLLAR COST GOING TO BE EXPERIENCED REGARDLESS OF THE END DESTINATION OF YOUR WASTE STREAM IF YOU HAVE TO PRETREAT IT? WHETHER IT IS GOING TO A POTW OR TO AN INJECTION FACILITY, IS THERE GOING TO BE AN EXPENSE INVOLVED IN PRETREATMENT?

A. Yes, but not necessarily the same expense.

Q. IS IT POSSIBLE THAT A PARTICULAR INJECTED WASTEWATER STREAM COULD BE SUCH THAT IT WOULD INTERACT WITH THE SUBTERRANEAN FORMATION IN A WAY THAT WOULD ALTER THE

CONFIGURATION AND STABILITY OF THAT SUBTERRANEAN FORMATION?

A. Certainly.

Q. IS IT NECESSARY, THEN, THAT THE INJECTED WASTEWATER STREAM BE "COMPATIBLE" WITH YOUR SUBTERRANEAN FORMATION SO THAT THE INJECTED WASTE MIGRATES AS PROJECTED, AS INTENDED AND DOES NOT DESTROY OR DETERIORATE THE SUBTERRANEAN FORMATION?

A. Yes. And that was alluded to in some of the testimony offered by Texcom.

Q. IS IT IMPERATIVE THAT THE WASTE STREAM THAT IS ACCEPTED FOR INJECTION BE A PARTICULAR COMPOSITION THAT IS GOING TO BE SUITABLE FOR THE FORMATION THAT IT IS BEING INJECTED INTO?

A. Well, there is a two-phase answer here. The answer is, yes, but because of the way the permits or the laws are written, a Class 1 nonhazardous waste facility can actually take material and treat it on-site to their standards for certain types of characteristics. In other words, they can take a waste that has solids that do not meet the criteria for the facility. They can filter them out on the surface prior to injection and then manage the solids as whatever type of waste stream, be it hazardous or nonhazardous, for appropriate disposal. Likewise, if they are accepting a stream where the pH of that stream is either too high or too low for their permit requirements, they can neutralize that waste stream on-site without having to have a RCRA permit for that waste treatment. So if they are lucky and

they take a stream that meets all of their criteria, yes; but they are also capable of treating the stream at the surface facility to render it acceptable for their injection parameters.

Q. IT APPEARS THAT THERE IS THE POSSIBILITY, IF NOT NECESSITY, THAT AN INDUSTRIAL WASTEWATER STREAM ACCEPTED BY TEXCOM WOULD HAVE TO BE PRETREATED SOMEWHERE, CORRECT?

A. Yes.

Q. COULD THAT PRETREATMENT BE DONE AT THE GENERATOR'S FACILITY?

A. Yes.

Q. COULD THAT PRETREATMENT BE DONE AT TEXCOM'S SURFACE FACILITY?

A. Yes.

Q. IF THE PRETREATMENT IS NOT DONE EFFECTIVELY, IS IT POSSIBLE THAT AN INJECTED WASTE STREAM COULD BE INCOMPATIBLE WITH THE SUBTERRANEAN FORMATION AND, THEREFORE, IMPACT OR DETERIORATE OR CHANGE THAT SUBTERRANEAN FORMATION?

A. Yes.

Q. WOULD IT BE NECESSARY, THEN, THAT TEXCOM ENSURE THAT THE WASTEWATER STREAM THEY RECEIVED AND SUBSEQUENTLY INJECTED WAS, IN FACT, CONSISTENTLY COMPATIBLE WITH THEIR

SUBTERRANEAN FORMATION TO AVOID SOME FORM OF DETERIORATION OR DESTRUCTION DOWN BELOW?

A. Absolutely.

Q. DO YOU KNOW IF THERE IS ANY DAILY MONITORING OR TESTING OF THE WASTEWATER STREAM AND EFFLUENT AT A PUBLICLY OWNED TREATMENT WORKS?

A. Yes, there is daily monitoring and testing of the wastewater stream and effluent.

Q. IS THERE SOME FORM OF DAILY MONITORING AND INSPECTING AT A POTW?

A. Yes.

Q. TYPICALLY, IF YOU KNOW, WHO PERFORMS THE DAILY MONITORING AND INSPECTING AT A POTW?

A. The facilities that I have worked with or discussed things with, generally the operators at the POTW are the individuals who will take the samples and insure that they are analyzed correctly, whether it be by a lab there or through whatever devices they have. So the operators of the facility are the ones who ensure that the waste stream is within the permitted or operational parameters at all times.

Q. AND TYPICALLY, IF YOU KNOW, WOULD THAT BE EITHER EMPLOYEES OF THE CITY OR THE ENTITY THAT OPERATED THE POTW?

A. I would assume it would have to be the entity that operates the POTW, whether they are city employees or private employees under contract to the City, that, I would not know.

Q. DO YOU KNOW WHAT FORM OF MONITORING OR TESTING WOULD OCCUR BEFORE A WASTE STREAM ACCEPTED BY TEXCOM WAS INJECTED?

A. Generally, when the contract is executed between the generator and the disposer, there are requirements for the generator to demonstrate to the disposer characteristics and specifics of the waste stream that are typical for that waste stream that would be relevant to the disposer. In addition to that, the disposer would be doing fingerprint analyses on every load being delivered to the disposal facility, and the fingerprint analyses are usually a short list or a set of analyses or analytes that are designed to indicate that the waste stream is still what the generator originally said it was.

Q. SO IF I UNDERSTAND YOUR ANSWER CORRECTLY, YOU ARE SAYING THAT THE GENERATOR HAS A REQUIREMENT TO SEND TO TEXCOM A WASTE STREAM THAT IS WITHIN CERTAIN PARAMETERS?

A. Yes. They will usually agree during the contract phase that this is our stream and this is what you will be getting. They obviously need to do that so the disposer can quote a price that is inclusive of whatever type of handling or pretreatment they would have to do prior to being able to inject it into their well.

Q. SO THEN TEXCOM OR THE OPERATOR OF THE INJECTION FACILITY HAS SOME FINGERPRINTING PROCESS, I BELIEVE YOU CALLED IT, THAT IS DESIGNED TO DETERMINE IF THE WASTE STREAM IS ONE THAT IS APPROPRIATE FOR THEIR INJECTION?

A. Correct. The fingerprinting actually serves two purposes. One, its primary purpose is to ensure that the loads being delivered or the material being delivered to the disposal facility is indeed what the generator claims it was based on the contract. The second part of the equation is it needs to be what the generator says it is because the system at the disposal facility for that wastewater stream will be set up to maximize the treatment process and minimize the number of minutes it takes between accepting the waste and getting it into the hole.

Q. SO THE PROCESS OF DETERMINING THAT A WASTE STREAM IS WHAT IT IS CONTRACTED TO BE AND THE PROCESS OF DETERMINING THAT THE WASTE STREAM IS APPROPRIATE FOR INJECTION INTO THE PARTICULAR FORMATION THAT IS AT THE BOTTOM OF THE WELL, IS THAT A PROCESS THAT IS UNDERTAKEN BY INDIVIDUALS APPARENTLY EMPLOYED BY THE INJECTION FACILITY?

A. That would be my assumption, yes.

Q. AND IF MISTAKES ARE MADE AND IF A WASTE STREAM IS ACCEPTED THAT IS, IN FACT, IMPROPERLY TESTED OR MISTAKENLY TESTED OR NOT TESTED AND THAT WASTE STREAM WAS INJECTED INTO THE FORMATION DOWN BELOW SUCH THAT IT CAUSED SOME DETERIORATION OR PROBLEM IN THAT FORMATION, WOULD THAT AFFECT THE INTEGRITY AND SAFETY OF THE INJECTION WELL PROCESS?

A. It could, yes.

III. MONTGOMERY COUNTY GENERATORS' METHOD OF DISPOSAL

Q. HAVE YOU HAD AN OPPORTUNITY TO FAMILIARIZE YOURSELF WITH GENERALLY THE METHODS OF DISPOSAL OF CLASS 1 NONHAZARDOUS INDUSTRIAL WASTEWATER HERE IN MONTGOMERY COUNTY?

A. Yes.

Q. WHAT METHODS, IF YOU KNOW, ARE PRESENTLY USED BASED ON YOUR RESEARCH?

A. In my review, the primary methods for management of Class 1 nonhazardous industrial wastewater in Montgomery County are discharge to a POTW after pretreatment and subsurface, or deep well, injection.

Q. ARE YOU FAMILIAR WITH THE NAMES OF ANY INDUSTRIAL GENERATORS HERE IN MONTGOMERY COUNTY THAT APPARENTLY USE DEEP WELL INJECTION?

A. Yes.

Q. WHAT WOULD THEY BE?

A. The primary generators of materials being injected into deep wells are Huntsman Petrochemical Corporation and a Chevron Phillips facility. Those seem to be the two primary generators that dispose of materials in deep wells.

Q. WHERE DO THOSE COMPANIES DISPOSE OF THEIR MATERIALS BY DEEP WELL INJECTION?

A. Huntsman disposes of their materials at the Big Hill Industry facility, which is Newpark in Jefferson County, as well as the Environmental Processing Systems facility in Liberty County.

Q. HOW MUCH OF HUNTSMAN'S WASTEWATER THAT IS BEING INJECTED IS TAKEN TO JEFFERSON COUNTY AND HOW MUCH TO LIBERTY COUNTY?

A. It appeared from my review that the Jefferson County facility receives about two-thirds of the material leaving Huntsman and the Liberty County facility receives about a third of it.

Q. WHERE DOES THE CHEVRON PHILLIPS MATERIAL, WHERE IS IT INJECTED, IF YOU KNOW?

A. I do not know. And let me add to that, I focused primarily on Huntsman simply because the preponderance of manifests were Huntsman manifests. They generate a far greater portion of Class 1 nonhazardous wastewater than any of the other generators that I reviewed in the County.

Q. ARE YOU AWARE OF HOW MANY COMPANIES OR INDUSTRIAL PROCESSES UTILIZE THE POTW OPERATED BY THE CITY OF CONROE?

A. I believe it is ten or eleven that are a part of their pretreatment program.

Q. DO YOU KNOW THE SIZE OF THE FACILITIES IN JEFFERSON AND LIBERTY COUNTIES AND HOW MANY COMPANIES OR CLIENTS THEY SERVE?

A. I know that the Newpark/Big Hill facility has permits for six wells. They currently have two of those permits active with wells. Their injection capacity is 300 gallons per minute across both of those wells and their surface tank is roughly half a million gallons or so.

Q. WHAT ABOUT THE OTHER FACILITY, THE ONE IN LIBERTY COUNTY?

A. I am not really familiar with the details on that one.

Q. ARE YOU FAMILIAR WITH THE GENERATION GENERALLY OF CLASS 1 NONHAZARDOUS INDUSTRIAL WASTEWATER IN MONTGOMERY COUNTY AS COMPARED TO GENERATION OF CLASS 1 NONHAZARDOUS INDUSTRIAL WASTEWATER IN OTHER COUNTIES IN THE HOUSTON AREA?

A. I have not done a county-by-county mathematical comparison; but looking at the level of industrialization in Harris County, Jefferson County, Brazoria County, Galveston County, and even Chambers County, it stands to reason that the generation of both hazardous and nonhazardous waste in the counties I just mentioned is far greater than the amount being generated in Montgomery County, which is why I was puzzled when I read in some of the testimony that Montgomery County is second only to Harris County in generation of Class 1 nonhazardous industrial wastewaters.

Q. DO YOU AGREE WITH THAT ASSESSMENT, THAT MONTGOMERY COUNTY IS SECOND ONLY TO HARRIS COUNTY?

A. No, not in my opinion; but this testimony did not define what counties they were actually including in that comparison.

Q. IS IT POSSIBLE THAT MONTGOMERY COUNTY EXCEEDS WALKER COUNTY TO THE NORTH?

A. Yes, it is possible.

Q. WHAT ABOUT GRIMES COUNTY TO THE WEST?

A. Probably.

Q. IS IT POSSIBLE THAT MONTGOMERY COUNTY EXCEEDS SAN JACINTO COUNTY TO THE NORTHEAST?

A. Yes.

Q. ARE YOU FAMILIAR WITH THE POPULATION OF THOSE COUNTIES AS THEY COMPARE TO MONTGOMERY COUNTY?

A. No, I am not.

Q. BASED ON YOUR REVIEW OF THE MATERIALS THAT YOU HAVE LOOKED AT IN THIS CASE, DR. WILDER, AND YOUR EXPERIENCE AND RESEARCH, IS THERE A NEED PRESENTLY IN MONTGOMERY COUNTY FOR A DEEP WELL INJECTION SERVICE TO SERVE THE GENERATORS OF CLASS 1 NONHAZARDOUS INDUSTRIAL WASTEWATER IN THIS COUNTY?

A. No, I do not believe there is.

Q. DO YOU KNOW IF HUNTSMAN PETROCHEMICAL PRESENTLY HAS ANY PERMITS FOR DEEP WELL INJECTION OF CLASS 1 NONHAZARDOUS INDUSTRIAL WASTEWATER?

A. In my review of the available records, it appears that Huntsman Petrochemical has two permits for disposal wells on their property in Conroe.

Q. IS HUNTSMAN PETROCHEMICAL THE PRIMARY GENERATOR OF CLASS 1 NONHAZARDOUS INDUSTRIAL WASTEWATER IN MONTGOMERY COUNTY THAT IS DISPOSING THEIR WASTEWATER BY DEEP WELL INJECTION?

A. Yes.

Q. SO IF HUNTSMAN PETROCHEMICAL CHOSE NOT TO UTILIZE THE SERVICES PRESENT IN EITHER JEFFERSON COUNTY OR LIBERTY COUNTY, WOULD THEY HAVE THE ABILITY TO PROCEED WITH DEEP WELL INJECTION ON A FACILITY THEY HAVE ALREADY RECEIVED THE PERMIT FOR?

A. Yes, they have the permits to do so.

Q. DO THEY HAVE THE ABILITY TO CONSTRUCT A WELL BASED ON THE EXISTING PERMITS FROM TCEQ?

A. From my review, it would appear, yes.

Q. IF HUNTSMAN PETROCHEMICAL CHOSE NOT TO SEND THEIR MATERIALS OUT OF COUNTY, DO THEY HAVE THE ABILITY, IF A WELL WAS CONSTRUCTED ON THEIR PROPERTY, TO DISPOSE OF THEIR MATERIALS THEMSELVES ON THEIR OWN PROPERTY?

A. Yes.

Q. IN LIGHT OF THEIR VOLUME GENERATED AND IN LIGHT OF THEIR ABILITY TO CONSTRUCT A WELL FOR WHICH THEY ALREADY HAVE A PERMIT, WOULD IT APPEAR THAT HUNTSMAN PETROCHEMICAL HAS ANY NEED FOR TEXCOM'S INJECTION FACILITY?

A. In my opinion, no. I do not see the need because Huntsman has not acted on such a need. They appear to be satisfied with the current situation of removing their waste by the truckload to the facilities I have mentioned before; and over the years of advising my clients on the various methods of modifying their process as part of waste management as well as managing the actual waste produced by the process, the clients have most frequently explained to me that monetary concerns or financial reasons are frequently factored in with considerations of risk and acceptable liability created by offsite disposal. And given that Huntsman has been operating under these conditions for numerous years, in my opinion, it would appear to an outside observer that Huntsman is satisfied with their current practices.

Q. IF TEXCOM WAS GRANTED A PERMIT HERE IN MONTGOMERY COUNTY AT THEIR SITE IN THE VICINITY OF CREIGHTON ROAD AND FM 3083 AND THEY WERE UNABLE TO SECURE HUNTSMAN PETROCHEMICAL AS A CLIENT, BASED ON YOUR REVIEW OF INFORMATION IN THIS CASE AND THE GENERATORS IN THIS COUNTY OF CLASS 1 NONHAZARDOUS INDUSTRIAL WASTEWATER, FROM WHERE WOULD TEXCOM BE REQUIRED TO OBTAIN ANY KIND OF SUBSTANTIAL VOLUME OF GALLONS OF CLASS 1 NONHAZARDOUS INDUSTRIAL WASTEWATER FOR INJECTION?

A. I do not see a group of generators or a single generator in the county other than Huntsman who could provide the, I believe, half a million gallons a day that TexCom would be capable of disposing of.

Q. SO IF THE GENERATORS WERE NOT FOUND IN MONTGOMERY COUNTY, WHERE WOULD THEY HAVE TO COME FROM?

A. Somewhere outside of the county.

Q. SO IF THE CLASS 1 INDUSTRIAL WASTEWATER OF A NONHAZARDOUS VARIETY WERE GENERATED FROM OUTSIDE THE COUNTY, WOULD THAT NECESSITATE THAT MATERIAL BEING TRUCKED INTO THE COUNTY TO TEXCOM'S SITE?

A. Presumably, yes. I mean, there are alternative methods of transportation, but there are not any rail spurs that I am aware of near this facility. Further, all that was discussed in the various testimony offered by TexCom was essentially transportation of materials to their site by truck.

Q. DID YOU HAVE AN OPPORTUNITY TO REVIEW THE PRETRIAL TESTIMONY OF RICHARD BOST?

A. Yes.

Q. ARE YOU FAMILIAR WITH SOME MILEAGE ESTIMATES THAT HE MADE CONCERNING TRANSPORT OF CLASS 1 NONHAZARDOUS INDUSTRIAL WASTEWATER FROM HUNTSMAN PETROCHEMICAL OR THE VICINITY OF HUNTSMAN TO THE TEXCOM FACILITY?

A. Yes.

Q. IF HUNTSMAN WAS NOT A CLIENT AND IF CHEVRON PHILLIPS WAS NOT A CLIENT, WHERE WOULD ANY SUBSTANTIAL VOLUME OF INJECTATE COME FROM?

A. It would have to come from a reasonably industrialized area or a reasonably large industrial source equivalent to Huntsman or equivalent to Chevron, but those are the only two I know of in the county. So presumably Harris County would be the closest source I could think of for industrial clients.

Q. IF HUNTSMAN OR CHEVRON PHILLIPS WERE NOT CLIENTS OF TEXCOM, DO MR. BOST'S CALCULATIONS OF TRUCK MILEAGE FIGURES HAVE ANY VALIDITY?

A. Not necessarily. For instance, if Huntsman or Chevron decides not to take TexCom up on their offer as a disposal facility, then the current situation of trucking the material to Liberty and to Jefferson Counties would still exist. In the meantime, we have a facility in Montgomery County in need of material to inject in order to stay fiscally viable, and you would have an increased number of trucks on the road to bring that material to the facility. So there would actually be an effective increase in truck traffic and mileage.

Q. HAVE YOU REVIEWED MR. BOST'S TESTIMONY CONCERNING THE PROSPECTIVE OR POTENTIAL ECONOMIC SAVINGS THAT HE SUGGESTS A CLIENT LIKE HUNTSMAN WOULD ENCOUNTER IF THEY USED THE TEXCOM FACILITY RATHER THAN CONTINUING TO TRANSPORT THEIR MATERIALS TO, SAY, NEWPARK?

A. Yes, I reviewed his numbers.

Q. DO YOU HAVE ANY COMMENT AS TO THE VALIDITY OF THOSE FIGURES OR ARE THEY SIMPLY ESTIMATES?

A. The estimates, whether they are valid or not, I cannot opine on. However, having done some research into the types of pricing a company or a generator with as large a volume of material as Huntsman, for instance, is capable of generating, their availability to negotiate a price well below list price is demonstrated. In my opinion, 10,000 gallons being delivered to the Newpark facility, for instance, should be on the order of $1600 to $1700. The facility price at Texcom, while I have no ability to comment on their pricing structure, Mr. Bost says that they are estimated to be between $1500 and $2500 for 10,000 gallons. The Newpark price that I estimated is well within that. It is actually at the lower end of the range that Mr. Bost offers for TexCom's disposal.

So one reason that I find the numbers less than adequate would simply be that he appears to have used either list prices or upper-range prices for disposal cost and ignored the fact that large-quantity generators frequently can negotiate extremely favorable pricing structure from both transporters as well as disposers.

Q. IS IT ENTIRELY POSSIBLE, PERHAPS EVEN TO SOME DEGREE OF PROBABILITY, THAT HUNTSMAN COULD CONTINUE TO SHIP ITS CLASS 1 NONHAZARDOUS INDUSTRIAL WASTEWATER TO NEWPARK EVERY BIT AS ECONOMICALLY AS WHAT MR. BOST PROJECTS WOULD BE THE COST FOR USING TEXCOM?

A. Yes.

Q. IF A GENERATOR WAS THE LARGEST GENERATOR AT AN INJECTION SITE, HOW DOES THAT COMPARE ON AN ISSUE OF LIABILITY WITH BEING ONE OF MANY GENERATORS AT AN INJECTION SITE?

A. Over my many years of advising clients on managing their environmental needs, I have found that risk management and management of potential liability from the waste streams, either nonhazardous or hazardous, is of utmost importance to my clients. I generally advise my clients to take a very careful look at the facilities they select for disposal for a variety of reasons. An established facility that can demonstrate performance and essentially adherence to permit requirements will present a much more known quantity to a generator than a new facility. That is not to say that new facilities should be disallowed automatically; but simply from the standpoint of my clients, I would advise them to take a look at facilities that have demonstrated performance capability.

In addition, as you have mentioned, facilities that serve a variety of clients, a variety of large industrial concerns, for instance, are going to be able to spread out any potential liability across those other clients and, in that sense, help to defray any costs for facility nonperformance or ultimately facility cleanup costs across a variety of clients and not become the sole responsibility of, let's say, a single or large contributing generator.

Q. FROM YOUR REVIEW OF MR. BOST'S TESTIMONY AND OTHER MATERIALS THAT YOU HAVE LOOKED AT IN THIS CASE, IF TEXCOM RECEIVED A PERMIT, WOULD IT APPEAR THAT IF HUNTSMAN PETROCHEMICAL BECAME A CLIENT, THEY WOULD BE OVERWHELMINGLY THE LARGEST CLIENT THAT TEXCOM MIGHT HAVE CERTAINLY IN THE LOCAL AREA?

A. It would appear that the half million gallons a day that TexCom could potentially inject could all come from Huntsman, if Mr. Bost's numbers are correct.

Q. FROM A RISK MANAGEMENT STANDPOINT, THEN, SHOULD THERE BE A PROBLEM AT THE INJECTION WELL OR SHOULD THERE BE A PROBLEM WITH PERMIT VIOLATION DOWN THE ROAD, HUNTSMAN THEN, WITH RESPECT TO WHATEVER EXPOSURE THEY MIGHT HAVE, WOULD BE THE PRIMARY GENERATOR EXPOSED?

A. If Mr. Bost's calculations are sound, that is correct.

Q. HAVE YOU HAD AN OPPORTUNITY TO REVIEW PAGE 21 OF MR. BOST'S PREFILED TESTIMONY CONCERNING THE NUMBER OF LIQUID NONHAZARDOUS WASTE CLASS 1 GENERATORS IN MONTGOMERY COUNTY?

A. Yes.

Q. DO YOU SEE INFORMATION THERE THAT SUGGESTS BY MR. BOST THAT 99.9 PERCENT OF THE CLASS 1 NONHAZARDOUS WASTEWATER GENERATED IN MONTGOMERY COUNTY IS GENERATED WITHIN SEVEN MILES OF THE PROPOSED TEXCOM FACILITY?

A. Yes.

Q. HAVE YOU HAD AN OPPORTUNITY TO REVIEW A TCEQ LISTING OF LARGE-QUANTITY GENERATORS FOUND IN MONTGOMERY COUNTY?

A. Yes.

Q. HOW MANY LARGE-QUANTITY GENERATORS ARE LOCATED WITHIN APPROXIMATELY SEVEN MILES OF THE TEXCOM FACILITY?

A. Two.

Q. WHO ARE THOSE GENERATORS?

A. Huntsman and Chevron Phillips.

Q. THE OTHER GENERATORS THAT ARE LOCATED WITHIN SEVEN MILES WOULD BE CATEGORIZED AS WHAT LEVEL GENERATORS?

A. They are either small-quantity generators or conditionally exempt small-quantity generators.

Q. WOULD IT BE FAIR TO SAY THAT THERE ARE ESSENTIALLY TWO LARGE-QUANTITY GENERATORS, THOSE BEING HUNTSMAN AND CHEVRON PHILLIPS, THAT MR. BOST MUST HAVE BEEN REFERRING TO IN SAYING THAT 99.9 PERCENT OF THE MATERIAL WAS GENERATED WITHIN SEVEN MILES OF THE TEXCOM FACILITY?

A. That would be a reasonable assumption, yes.

Q. AS FAR AS YOU KNOW, ARE CHEVRON PHILLIPS AND HUNTSMAN DISPOSING OF THEIR CLASS 1 NONHAZARDOUS WASTEWATERSUFFICIENTLY AT THE PRESENT TIME?

A. The facilities are operating and they are not under any type of enforcement action for their Class 1 nonhazardous industrial wastewater disposal practices, so I would have to assume, yes, they are operating just fine.

Q. IF THOSE TWO FACILITIES, CHEVRON PHILLIPS AND HUNTSMAN, IN FACT, CONSTITUTE MOST OF THIS 99.9 PERCENT THAT MR. BOST IS

REFERRING TO AND IF THEY CHOSE TO CONTINUE TO PURSUE THEIR CURRENT DISPOSAL PRACTICES, WOULD IT BE FAIR TO SAY, THEN, THAT THERE WOULD BE PRACTICALLY NO SUBSTANTIAL OR NO SIGNIFICANT QUANTITY OF CLASS 1 NONHAZARDOUS INDUSTRIAL WASTEWATER GENERATED IN MONTGOMERY COUNTY THAT MIGHT USE THE TEXCOM FACILITY?

A. Yes. Without Huntsman and Chevron contributing their Class 1 nonhazardous materials for disposal at TexCom, by Mr. Bost's testimony, there would be extremely little material left in the county for TexCom to dispose of.

Q. WOULD IT BE FAIR TO SAY THAT RATHER THAN A NEED FOR CLASS 1 INDUSTRIAL WASTEWATER DISPOSAL HERE IN MONTGOMERY COUNTY, TEXCOM HAS SIMPLY DISCOVERED AN OPPORTUNITY TO BE THE NEW OR REPLACEMENT METHOD OF DISPOSAL OF CLASS 1 NONHAZARDOUS INDUSTRIAL WASTEWATER IN MONTGOMERY COUNTY?

A. Yes. They appear to have identified a possible market and appear to be attempting to capture that market.

Q. BASED ON YOUR REVIEW OF CURRENT RECORDS, MR. BOST'S TESTIMONY, AND YOUR KNOWLEDGE OF THE LARGE-QUANTITY GENERATORS CURRENTLY EXISTING IN MONTGOMERY COUNTY, IF TEXCOM'S FACILITY WAS NOT PERMITTED AND THEY WENT AWAY, WHAT WOULD CHANGE WITH RESPECT TO DISPOSAL OF CLASS 1

NONHAZARDOUS INDUSTRIAL WASTEWATER IN MONTGOMERY COUNTY?

A. Nothing. It would remain as it has been for the past several years at least.

Q. HAVE YOU BEEN ABLE TO DISCOVER A TRUE NEED FOR ANY NEW METHOD OF DISPOSAL OF CLASS 1 NONHAZARDOUS INDUSTRIAL WASTEWATER IN MONTGOMERY COUNTY?

A. No.

Q. HAVE YOU BEEN ABLE TO DISCOVER IN YOUR RESEARCH ANY TRUE CURRENT NEED FOR AN ADDITIONAL CAPACITY BEYOND WHAT CURRENTLY EXISTS FOR DISPOSAL OF CLASS 1 NONHAZARDOUS INDUSTRIAL WASTEWATER IN MONTGOMERY COUNTY?

A. No. The current facilities still have capacity.

IV. AIR EMISSIONS AND ENERGY IMPACT

Q. HAVE YOU HAD AN OPPORTUNITY TO REVIEW PAGES 23 AND 24 AND PORTIONS OF PAGE 25 OF MR. BOST'S TESTIMONY?

A. Yes, I have.

Q. AND SPECIFICALLY, I WANT TO DIRECT YOUR ATTENTION TO MR. BOST'S SUGGESTION OF THE ENERGY IMPACT OF TEXCOM'S FACILITY AND THE REDUCTION OF AIR EMISSIONS THAT MIGHT BE ASSOCIATED WITH TEXCOM'S FACILITY. IF, IN FACT, TRUCK TRAFFIC TRAVELING ACROSS MONTGOMERY COUNTY FROM, LET'S SAY, HUNTSMAN AND/OR CHEVRON PHILLIPS TO LOCATIONS OUT OF THE COUNTY, IF THAT WERE REDUCED, WOULD YOU AGREE

THAT THERE MIGHT BE AN AIR EMISSIONS REDUCTION IN MONTGOMERY COUNTY?

A. If the truck traffic were reduced, yes, there would be energy savings and a commensurate reduction in air emissions.

Q. IF, HOWEVER, AS WE HAVE SUGGESTED PREVIOUSLY, HUNTSMAN AND CHEVRON PHILLIPS DID NOT BECOME CUSTOMERS AND CONTINUED TO TRUCK THEIR MATERIAL OUT OF COUNTY AND, THEREFORE, TO ACQUIRE ANY SIZABLE CLIENTS, TEXCOM HAD TO BRING CLIENTS FROM OUTSIDE THE COUNTY TO TRUCK THEIR MATERIALS INTO THEIR SITE, WOULD THAT NOT, IN FACT, INCREASE THE AIR EMISSIONS TRAFFIC BEYOND WHAT IT IS TODAY?

A. Yes. An increase in traffic would create an increase in emissions.

Q. SO IS IT FAIR TO SAY THAT MR. BOST'S CALCULATION THAT AIR EMISSIONS WOULD BE REDUCED IS ABSOLUTELY CONTINGENT UPON HUNTSMAN AND/OR CHEVRON PHILLIPS, SPECIFICALLY HUNTSMAN, BECOMING CUSTOMERS OF TEXCOM'S FACILITY?

A. In my opinion, yes.

Q. HAVE YOU REVIEWED THE ENERGY IMPACT COMMENTS THAT MR. BOST HAS MADE IN HIS PREFILED TESTIMONY?

A. Yes.

Q. DR. WILDER, CAN YOU MAKE ANY SENSE OF MR. BOST'S ASSERTIONS THAT THERE WILL BE ENERGY SAVINGS IF THE TEXCOM FACILITY IS PUT ONLINE?

A. Yes. I believe what Mr. Bost is saying is if we reduce the distance to be driven by the trucks, that they will use less fuel and, therefore, consume less energy, which is correct, again, assuming that the business is captured by TexCom. If not, then we are back to the same issue as we were with emissions, which is actually an increase in fuel consumption because the same trucks will be taking the material over to the existing disposal sites; but additional trucks will be required to bring other material to TexCom for disposal.

Q. ARE THERE ANY OTHER ENERGY ASSERTIONS THAT MR. BOST HAS MADE THAT YOU HAVE LOOKED AT?

A. Well, I am not sure I follow Mr. Bost in his suggestion that additional potential savings may be gained from reducing loads on current disposal sites. In my opinion, reducing the loads on current disposal sites will reduce those sites' revenues; but I am not really sure how there would be any kind of potential savings to anyone.

Q. HAVE YOU HAD AN OPPORTUNITY TO REVIEW MR. BOST'S TESTIMONY BEGINNING ON PAGE 24 AND CONTINUING ON PAGE 25 TO THE EFFECT THAT MANY FACILITIES OPERATE WITHIN THESE SURFACE WATER DISCHARGE AND AIR EMISSION PERMIT LIMITS; OTHERS ARE CHARACTERIZED BY PERIODIC VIOLATIONS RESULTING IN EXCESSIVE DISCHARGES OF AIR EMISSIONS; EVEN

WHEN FACILITIES OPERATE WITHIN PERMIT LIMITS, THESE FACILITIES RELEASE MANY TONS OF HAZARDOUS SUBSTANCES INTO OUR AREA STREAMS AND INTO THE AIR?

A. Yes, I have.

BASED ON YOUR EXPERIENCE AND KNOWLEDGE OF WATER TREATMENT FACILITIES AND DISPOSAL OF CLASS 1 NONHAZARDSOUS INDUSTRIAL WASTEWATER, ARE YOU ABLE TO COMMENT ON WHAT MIGHT BE BEHIND MR. BOST'S STATEMENT ON PAGE 25?

A. Well, I am not really sure. Obviously the TexCom facility will also operate under permit restrictions and has the potential for occasionally violating that permit or having excessive discharges or air emissions like any operating facility. It is impossible to operate with 100 percent efficiency in my opinion. As to the discharge of hazardous substances into the area streams and into the air, there are materials that are discharged in POTW discharges or other facilities in their water treatment streams. But these discharges are regulated by agencies whose job it is to ensure that the load does not exceed the ecosystem's capacity to absorb and essentially detoxify or nullify the overall detrimental effect of this discharge. Nature does have a certain ability to regenerate and to recover. Indeed, there are many natural processes that release toxic materials into the environment; but the regulatory community has generated permits and discharge requirements based on the ability for any given ecosystem to absorb the discharges without detriment

to the ecosystem or the people and animals and plants that reside in those ecosystems.

Q. DR. WILDER, DO YOU THINK IT IS A TRUE STATEMENT THAT EVEN WHEN FACILITIES SUCH AS POTWS OPERATE WITHIN PERMIT LIMITS, THESE FACILITIES RELEASE MANY TONS OF HAZARDOUS SUBSTANCES INTO OUR AREA STREAMS AND INTO THE AIR?

A. Well, again, as I said earlier, depending on the volume of the discharge stream, if you have millions and millions of gallons with parts per million discharges of metals or whatever, yes, you could actually get to tons of materials discharged over a year; but the extent to which that material has a detrimental impact on the environment, of course, is debatable. The whole reason we have environmental regulatory oversight in this country is to ensure that discharges of wastewater, treated or not, into the environment are done so in a manner that provides overall protection of the environment and the people.

Q. SO ARE YOU SAYING THEN, DR. WILDER, THAT THIS STATEMENT IS TRUE; BUT IT IS NOT A PROBLEM BECAUSE THE RELEASE OF MANY TONS OF THESE HAZARDOUS SUBSTANCES INTO OUR AREA STREAMS AND INTO THE AIR IS APPROPRIATE, REGULATED, AND SAFE BECAUSE THAT IS THE WAY THEY ARE DESIGNED?

A. I am saying that it is a system that has been shown to be sufficient for protection of the environment and the population to date and that generally regulators tend to be capable of growing with the knowledge base and with the increase in industrial activity to continually adjust and provide a margin of safety for the environment.

It is not always the case when there might be catastrophic releases; but, again, nature is refractory and it does recover. The loads that are permitted to be discharged are not unknown to the regulated community, and they are designed to be protective of the environment. So in my opinion, no, it is not a problem.

V. CONCLUSION

Q. IN ALL OF YOUR REVIEW OF THE TESTIMONY OF MR. BOST AND THE MATERIALS THAT YOU HAVE LOOKED AT, DO YOU FEEL THERE IS TRULY A NEED FOR THE TEXCOM FACILITY TO BE PLACED INTO OPERATION HERE IN MONTGOMERY COUNTY?

A. No, I do not.

Q. WHY DO YOU FEEL THERE IS NO NEED FOR THE TEXCOM FACILITY TO BE PLACED INTO OPERATION HERE IN MONTGOMERY COUNTY?

A. The reason I say there is no need is, in my experience, industry basically drives itself in this respect. If you have a need that is going to either be required for an industry to proliferate or to prosper, then the industry will react to it. In this particular case, the two large-quantity generators that presumably are the target of the calculations done by Mr. Bost have not expressed any need or interest in an alternative to their current waste disposal practices and, indeed, not being privy to the boardroom discussions, I am not sure that their risk management policies would cause them to want to change to a new system or an unproven entity.

Q. ARE THERE FACILITIES PRESENT IN NEARBY COUNTIES TO TAKE CARE OF DEEP WELL INJECTION IN WHERE THERE IS, IN FACT, A GREATER PRESENCE OF INDUSTRIAL NEED?

A. Yes, the two facilities that we have mentioned already, the Newpark facility in Winnie, what is referred to as the Big Hill facility, and also the EPS facility in Dayton, Liberty County.

Q. DR. WILDER, GIVEN THE PRESENCE OF FACILITIES IN NEARBY COUNTIES ADDRESSING THE NEED, AND GIVEN THE APPARENT LACK OF NEED LOCALLY AS WE UNDERSTAND THE TWO LARGEST-QUANTITY GENERATORS APPARENTLY ARE MEETING THEIR NEEDS ELSEWHERE, IS IT IN THE PUBLIC INTEREST OF MONTGOMERY COUNTY AND THE CITIZENS OF MONTGOMERY COUNTY TO HAVE TEXCOM'S PERMIT GRANTED?

A. No, I do not believe it is.

Q. Thank you, Dr. Wilder.